Chapter 16 - Drinking Water Management (REDACTED)

16.1 Applicability

This instruction is applicable to all civil servant and contractor employees and resident agency personnel at Ames Research Center (Ames) and Moffett Federal Airfield (MFA).

16.2 Purpose

This chapter prescribes the roles and responsibilities for the monitoring of drinking water quality and the operations and maintenance of the water distribution system at Ames.

16.3 Policy

It is the policy of the Ames Research Center to:

1. Comply with all pertinent statutory and regulatory requirements and Executive Orders related to drinking water management. Ames recognizes and will comply with applicable Federal, state, and local regulations.
2. Consult about the best techniques and methods to manage drinking water, as appropriate, with Federal, state, and local agencies, including:
   - U.S. Environmental Protection Agency (EPA)
   - California Department of Health Services (DHS)
   - San Francisco Water Department
   - Santa Clara Valley Water District
   - Santa Clara County Health Department
   - State Water Resources Control Board
3. Promote employee awareness of drinking water quality through active information dissemination.

16.4 Authority

All relevant Federal, state, and local laws and regulations related to drinking water quality and the operation and maintenance of the water distribution system:

1. Safe Drinking Water Act of 1974 (42 U.S.C. 300 et seq.), as amended in 1986, 1991, and 1996
2. Executive Order 12088, amended by Executive Order 12580, Federal Compliance with Pollution Standards
3. Code of Federal Regulations:
   - Title 40, Part 141, National Primary Drinking Water Regulations
   - Title 40, Part 143, National Secondary Drinking Water Regulations
4. California Code of Regulations:
   - Title 17, Sections 7583-7605, Drinking Water Supplies
   - Title 22, Chapter 15, Sections 64400-64501, Domestic Water Quality and Monitoring Regulations
   - Title 22, Chapter 16, Sections 64551-64644, California Waterworks Standards
   - Title 22, Chapter 17.5, Sections 64670-64692, Lead and Copper

5. California Health and Safety Code:
   - Section 4017
   - Sections 4049.50 and 4049.51
   - Section 13114.7
6. Uniform Plumbing Code.

16.5 Responsibilities

16.5.1 Consumers of Drinking Water

1. Inform the Safety, Environmental, and Mission Assurance Office (Environmental Office), Code QE, of any significant changes in the color, taste, or odor of drinking water.
2. Consume water only from designated drinking sources, such as fountains, kitchen areas, break rooms, etc.
3. Follow common safety practices by not using taps in laboratories, work shops, etc., as drinking water sources.
4. Heed any posted signs regarding drinking water use.

16.5.2 Environmental Services Office, Code QE, (Environmental Office)

1. Identify laws and regulations to which Ames must adhere.
2. Develop Ames policy to implement the identified laws and regulations.
3. Provide oversight and direction.
4. Provide consultation, services, and support.
5. Provide routine and nonroutine drinking water-quality monitoring.
6. Respond to water-quality complaints.
7. Notify employees in the event of unsafe water quality.
8. Develop and implement lead and copper monitoring programs.
9. Assist in the development of water-quality mitigation measures.
10. Assist in the development of backflow prevention and cross-connection control programs.
11. Assist in the development of emergency contingency plans.
12. Maintain records for the time intervals specified in the regulations:
    - Bacteriological - five years.
    - Complaints - three years.
    - Reports/Surveys - ten years.

16.5.3 Plant Engineering Branch, Code JFP

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16.5.4 Contracting Officers Technical Representatives

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16.5.5 Facilities Engineering Branch, Code FEF

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16.6 Definitions

16.6.1 Action Level

The concentration of lead or copper in water that determines, in some cases, when control and/or notification measures are required. (40 CFR 141.2)

16.6.2 Backflow Prevention

Prevention of the reverse flow of contaminated water from a location back to the water distribution system as a result of loss of pressure in the water mains.

16.6.3 Contaminant

Any physical, chemical, biological, or radiological substance or matter in water. (40 CFR 141.2)

16.6.4 Cross Connection

The connection of a nonpotable water line with a potable water line, usually enabled by backflow.

16.6.5 Disinfectant

Any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, ozone, or ultraviolet light, added to water in any part of the treatment or distribution process that is intended to kill or inactivate pathogenic microorganisms. (40 CFR 141.2)

16.6.6 Disinfection

A process that inactivates pathogenic organisms in water by chemical oxidants or equivalent agents. (40 CFR 141.2)

16.6.7 Maximum Contaminant Level

The maximum permissible level of a contaminant in water that is delivered to any user of a public water system. (40 CFR 141.2)

16.6.8 Potable

Fit to drink.

16.6.9 Primary Drinking Water Standards

Concentrations of specified contaminants that, when exceeded, present a risk to the health of humans when continually used for drinking or culinary purposes.

16.6.10 Residual Disinfectant Concentration

The concentration of disinfectant measured in milligrams per liter in a representative sample of water. (40 CFR 141.2)

16.6.11 Sanitary Survey

An onsite review of a public water system for the purpose of evaluating the adequacy of the water source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water. (40 CFR 141.2)

16.6.12 Secondary Drinking Water Standards

Levels of specified contaminants or physical properties that, when exceeded, may be objectionable to an appreciable number of people, but are not generally hazardous to health.

16.6.13 Total Trihalomethanes

The sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane, dibromochloromethane, bromodichloromethane, and tribromomethane). (40 CFR 141.2)

16.7 Affected Operations

Any operation that affects the distribution of the potable water supply. Some examples of affected operations include water-line maintenance, fire hydrant flushing, repair, or replacement; backflow-prevention-device maintenance, repair, or replacement; modifications to interior plumbing; or water-cooler maintenance.

16.8 Requirements

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16.9 Sources of Additional Information or Assistance

1. Environmental Office (Code QE, REDACTED)
2. Environmental Office (WWW home page at http://dq.arc.nasa.gov)

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